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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/821,820

03/29/2001

John Sabat JR.

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01/24/2005

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EXAMINER

PRIETO, BEATRIZ

ART UNIT

PAPER NUMBER

2142

DATE MAILED: 01/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,820

Applicant(s)

SABAT ET AL.

Examiner

Prieto Beatriz

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,5-11 and 14 is/are rejected.
7) ☒ Claim(s) 3,4,12 and 13 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 29 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/01 & 06/02.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Application No. 09/821,820 filed on 03/29/01, claims 1-14 have been examined and remain pending.
2. Regarding the abstract of the disclosure, applicant is urged to review the abstract with respect to its length, which should not exceed 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited (see MPEP).
3. Specification is objected to due to the following noted informality, in this case on page 12, there seems to be a reference to common assignee application, however no serial/patent number is disclosed. Correction is required.
4. Claims 1 and 10 recite the limitation "the shared transport medium" in the last line. There is insufficient antecedent basis for this limitation in the claim. Claim 7 recites the limitations "the common transport medium", and "the base stations equipment", there is insufficient antecedent basis for these clauses. Correction is required.
5. Claims 3 and 12 (4 and 13 by virtue of dependency) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims
6. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In this case, it is not clear where in the disclosure a written description describing claim limitation, "accepting requests for distribution service from multiple tenant service providers, the requests specifying a desired air interface for wireless communication from among a plurality of available air

interfaces, and an indication of which portions in the coverage area the particular air interface is to be supported” found. Applicant is urged to point out where is this limitation described in the specification.

Claim Rejection under 35 U.S.C. 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5-11 and 14 rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton-Piercy et. al. US 5,802,173 (Hamilton hereafter).

Regarding claim 1, Hamilton teaches

a first tenant base station (207) at a “first tenant network management” system (OCMS) operated by a “first wireless communication service” provider (col 3/lines 51-54 , col 8/lines 53-67 and col 11/lines 30-35);

a second tenant base station (208) at a “second tenant network management “ system (CCMS) operated by a “second wireless communication service” provider (col 3/lines 51-54, col 8/lines 53-67 and col 11/lines 30-35), wherein the second tenant and first tenant are collocated (col 7/lines 13-14, col 8/lines 53-67);

frequency translator modules (150/152 of Fig. 4) “transport medium” for converting radio frequency signal transmitted by the first and second base stations relating thereto to a fiber optic link “common transport medium” (col 15/lines 62-col 16/line 2, 42-47, and reference claims 2d and 4);

first and second base station converts received and transmitted RF signal containing, voice and control data in a format suitable for transmission on an electrical or optical transmission facility into or from radio frequency (RF) signals (col 3/lines 9-20);

a plurality of remotely located antennas comprising antenna system (18) “radio access nodes”, each radio access nodes associated with a predetermined sub-area of a total system coverage area (col 6/lines 55-col 7/line 2, and col 15/lines 26-30, 44-54);

each radio access node coupled to receive signal from the common transport medium (col 13/lines 19-23);

each radio access node containing a “first and second slice module” blocks associated with the respective first and second tenant base stations (col 25/lines 67-col 27/line 16 and reference claim 2c);

hub site “common network management” forwards control messages conveyed from the OCMS system via MTSO (200) to the base station, said RF control signals comprising a pilot carrier to intended slice modules (152/153) associated with respective base station for controlling a predetermined frequency block, i.e. slice module (col 17/lines 55-col 19/line 11).

Regarding claim 2, limit access by tenants to status and control information associated with tenant’s respective radio access nodes (col 16/lines 5-41 and col 16/lines 54-col 17/line 14).

Regarding claims 5-6, storage medium “database” for storing information from request from the common network management, wherein messages from the first or second network management system for the radio access not responds from stored information (col 19/lines 61-col 20/line 3).

Regarding claim 7, this claim comprises limitation substantially the same as claim 1, same rationale of rejection is applicable, further includes a common network management system installed at a central location for “intercepting control message traffic” data from and to said network management systems and forwarding “routing” said data to a “common control message handler” data processing entity (i.e. hub site “common network management” forwards control messages conveyed from the OCMS system via MTSO (200) to the base station col 17/lines 55-col 19/line 11), signals intended for a mobile 206 are routed by the MTSO to an RBS 205 that can adequately serve this mobile (col 11/lines 1-19).

Regarding claim 8, a shared communication link “transport medium” over which control messages are transmitted “routed” to the radio access nodes (i.e. fiber optic link “common transport medium” see col 15/lines 62-col 16/line 2, 42-47, and reference claims 2d and 4).

Regarding claim 9, sending a “generic status” query to the radio access nodes; storing, in a storage means the responses; and in response to “control” message originating from one of the tenant network management systems, obtaining said stored information (col 19/lines 61-col 20/line 3).

Regarding claim 10, this system claim is substantially the same as claim 1, same rationale of rejection is applicable.

Regarding claims 11 and 14, these claims are substantially the same as claims 2 and 5, respectively, same rationale of rejection is applicable.

Citation of Pertinent Art:

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Copies of Non-patent literature documents cited will be provided as set forth in MPEP§ 707.05(a):

US 5,457,734

Eryaman et. al. teaches with respect to the system of Fig. 1, a first base station (104 or 801 of Fig. 8) operated by a first radiotelephone "wireless" communication service provider (151) and a first management system (101) operated by the first wireless communication service provider (col 1/lines 44-4, col 3/lines 5-20);

a second base station (114 or 802 of Fig. 8) operated by a second wireless communication service provider (152) and a second management system (111) operated by the second wireless communication service provider first and second base stations are collocated (col 4/lines 58-66, col 3/lines 21-32); further on Figs 8-9, said first base station (801) and said second base station (802) include

a frequency converter "transport medium interface" (931-932 of Fig. 9) converting radio frequency band signals transmitted by the first and second base stations (801-802 of Fig. 8) (col 3/lines 52-col 4/line 7) to a common transmission "transport" medium, i.e. fiber optic cable medium (825 or 925 of Figs. 8-9, respectively) (col 5/lines 21-63);

a plurality of remotely located "radio access nodes" antennas (106, 506) (col 4/lines 58-66), each radio access node associated with a predetermined portion of a total system cellular coverage service sector (col 1/lines 62-65, col 4/lines 67-col /line 12);

each radio access node coupled to receive/transmit (uplink/downlink) signals from/to the common transport medium transmitted/received by the base station associated with respective service provider (col 4/lines 15-27, 58-66);

each radio access node containing a first and second tenant slice module associated with the respective first and second BTS,

US 5,781,865

Gammon teaches a system/method including a multi-sector antenna (200) ("radio access node") having any number of individual antennas each associated with a predetermined portion of a total system geographic coverage service area (col 1/lines 62-65, col 4/lines 67-col /line 12),

wherein the said antenna is shared by multiple service providers (col 7/lines 35-44), each radio access node (1400 of Fig. 14) containing a first and second module (1405s) "slice" associated with a respective transmit/receive equipment corresponding to respective service provider (col 9/lines 1-12);

a first base station (500 transmitter/receiver system of Fig. 5) operated by a first Personal Communication Service Provider (PCS) (col 1/lines 38-52) and a first management system operated by the first wireless communication service provider;

a second base station (500 transmitter/receiver system of Fig. 5) operated by a second PCS (col 1/lines 38-52) and a second management system operated by the second wireless communication service provider first and second base stations are collocated, i.e. sharing a cell site (col 1/lines 5-26, col 2/lines 44-51);

a plurality of cell site towers having each installed a multi-sector antenna "radio access nodes" associated with a predetermined portion of total system coverage cell area (col 2/lines 32-63, col 1/lines 27-37).

US 5,648,961

Ebihara teaches an antenna comprising a frequency converter (53), for converting a control "send" signal ("message") via a control channel transmitted from a base station (2) to an antenna (5) via a transport medium (3) (col 5/lines 34-63);

US 5,390,233

Jensen et. al. teach a system/method wherein wireless telephone users comprise groups of tenants in which users of like characteristics are normally members of the same tenant group, e.g. groups of employees of different companies who work at locations within customer premises 10 may comprise respective groups of tenants with each company being a service provider. A predetermined set of base stations is assigned to support each tenant group. Preferably, a base station cannot be accessed by a user who is a member of a tenant group not assigned to that base station. Base stations 24 and 28 support a first group of subscribers (tenants) associated with service provider X, and base stations 26 and 30 support a second group of subscribers associated with service provider Y. Subscribers in the second group are not provided voice communication access via base stations 26 and 30, and likewise subscribers in the first group are not provided voice communications via base stations 26 and 30.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (571) 272-3902. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (571) 272-3896. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free).

Any response to this action should be mailed to:


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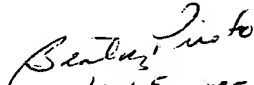
or faxed to the Central Fax Office:

(703) 872-9306, for Official communications and entry;

Or Telephone:

(703) 306-5631 for TC 2100 Customer Service Office.


B. Prieto
TC 2100
Patent Examiner
January 11, 2005


Patent Examiner